

## CLAIMS

- 1 1. An imaging system for receiving images, said system comprising:  
2 an image receiving unit for receiving an input image; and  
3 a spatial light modulator interposed between said image receiving unit and an input  
4 image, said spatial light modulator for selectively modulating the input image such that at least  
5 one portion of the input image may be blurred as it passes through said spatial light modulator  
6 toward said image receiving unit.
- 1 2. An imaging system as claimed in claim 1, wherein said image receiving unit comprises  
2 an array of photodetector cells.
- 1 3. An imaging system as claimed in claim 1, wherein said spatial light modulator comprises  
2 an array of liquid crystal opto-electronic elements.
- 1 4. An imaging system as claimed in claim 1, wherein said spatial light modulator comprises  
2 an array of birefringent elements for selectively effecting a blurring of the input image.
- 1 5. An imaging system as claimed in claim 4, wherein birefringent characteristics of each  
2 birefringent element are selectively controlled independent of other birefringent elements.
- 1 6. An imaging system as claimed in claim 1, wherein said spatial light modulator includes  
2 liquid crystal cell.
- 1 7. An imaging system as claimed in claim 1, wherein said liquid crystal cell is surrounded  
2 along its periphery by a plurality of electrodes.

1 8. An imaging system as claimed in claim 1, wherein said system includes a plurality of  
2 spatial light modulators interposed between the input image and said image receiving unit.

1 9. An imaging system as claimed in claim 1, wherein said image receiving unit includes a  
2 holographic material.

1 10. An imaging system as claimed in claim 1, wherein said image receiving unit includes a  
2 robotic vision system.

1 11. An imaging system as claimed in claim 1, wherein said image receiving unit includes a  
2 visual monitoring system.

12. An imaging system for selectively blurring portions of an image field, said system  
comprising:

an array of birefringent elements through which the image field may pass, said  
birefringent elements being individually selectable to permit selective birefringence of the input  
image.

13. An imaging system as claimed in claim 12, wherein said system permits selective  
blurring in areas specified by an image compression algorithm.

1 14. An imaging system for selectively blurring portions of an image field, said system  
2 comprising:

3 a liquid crystal cell through which the image field may pass; and

4 a plurality of electrodes positioned adjacent said liquid crystal cell such that portions of

5 said liquid crystal cell may be selected to provide birefringence of the image field as the image  
6 field is refracted through said liquid crystal cell.

1 15. An imaging system as claimed in claim 14, wherein said portions of said liquid crystal  
2 cell may be selected to provide a desired amount of birefringence of the image field as the image  
3 field is refracted through said liquid crystal cell.

1 16. An imaging system for receiving images, said system comprising:  
2 an image receiving unit for receiving an input image; and  
3 a spatial light modulator interposed between said image receiving unit and an input  
4 image, said spatial light modulator including a first area for refracting the input image along a  
5 principle axis of refraction toward said image receiving unit, and a second area for refracting the  
6 input image along the principle axis of refraction and along a second axis of refraction, said  
7 second axis of refraction being angularly disposed to said first axis of refraction.

13 17. An imaging system as claimed in claim 16, wherein said imaging system further includes  
14 a control unit for varying the angular direction of said second axis of direction with respect to  
15 said principle axis of refraction.

1 18. An imaging system for receiving images, said system comprising:  
2 an image receiving unit for receiving an input image; and  
3 a spatial light modulator interposed between said image receiving unit and an input  
4 image, said spatial light modulator including a first area for refracting the input image along a  
5 principle axis of refraction toward said image receiving unit and along a second axis of

6 refraction, said second axis of refraction being angularly disposed to said first axis of refraction,  
7 and a second area for refracting the input image along the principle axis of refraction and along a  
8 third axis of refraction, said third axis of refraction being angularly disposed to said first axis of  
9 refraction at an angle greater than the angle of said second axis of refraction.

1     19.     An imaging system as claimed in claim 18, wherein said system further comprises a third  
2     area for refracting the input image along the principle axis of refraction and along a forth axis of  
3     refraction, said forth axis of refraction being angularly disposed to said first axis of refraction at  
4     an angle greater than the angle of said third axis of refraction.

1 20. An imaging system as claimed in claim 18, wherein said spatial light modulator  
2 comprises an array of birefringent elements.

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